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HORMONE HEALTH

BY HEALTH FOR ALL

CORTISOL

Consistently high cortisol can lead to complications, so it's important to recognize the signs and symptoms so you can receive appropriate treatment.

LOWERING CORTISOL

Some things you can do right now to potentially lower your cortisol levels.

SUPPLEMENTS

Many vitamins and minerals have been researched for their potential roles in treating hormone imbalances, but only some have shown promise.

WHAT ARE HORMONES?

What are hormones and how can you really tell if your hormone levels are off?

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Cortisol is a hormone produced in the adrenal glands that controls many different body functions, including regulating blood sugar and metabolism, supporting immune function, controlling blood pressure and inflammation, and managing the stress response.

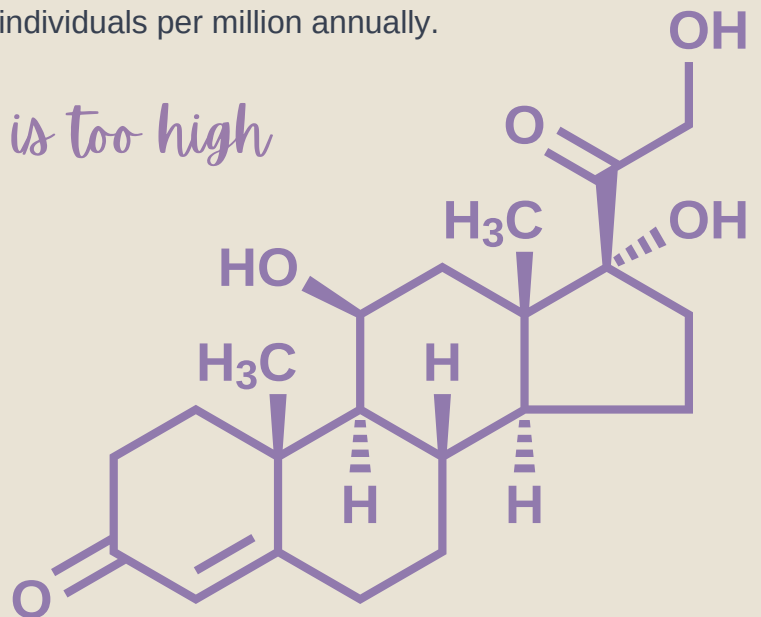
Signs and Symptoms of High Cortisol



While stress and certain medications, such as steroids, can elevate cortisol levels, the primary causes of high cortisol include pituitary or adrenal gland disorders, benign tumors in these glands, or tumors elsewhere in the body. Persistent high cortisol levels can result in Cushing's syndrome, a rare condition that affects approximately 10 to 15 individuals per million annually.

Symptoms that your Cortisol is too high

- Weight gain
- Skin and hair changes
- Mental health issues
- Fatigue and weakness
- Reproductive effects
- Chronic health conditions



Weight Gain

Elevated cortisol levels can disrupt metabolism, leading to weight gain, even without changes in diet or physical activity. While the exact role of cortisol in metabolism is debated, high cortisol levels are associated with increased appetite, potentially leading to overeating. This can result in fat accumulation, particularly in the chest, abdomen, face, and upper back.

Skin Changes

People with elevated cortisol often bruise more easily and may see an increase in purple stretch marks on their abdomen, thighs, or arms. This is because cortisol is a glucocorticoid, made by the adrenal gland, and too much glucocorticoid can thin and weaken the skin, leading to noticeable damage in the upper layers of skin.



Hair Changes

Increased levels of cortisol can also cause an increase in hair growth, called hirsutism, which often affects areas like the face and neck. Meanwhile, high levels of cortisol can also disrupt the normal hair growth pattern and cause some women to experience hair loss or balding.

Mental Health Issues

Cortisol actually affects changes in the brain that manifest as anxiety, depression, and even insomnia.

Fatigue & Weakness

High levels of cortisol can cause muscle atrophy over time, weakening the shoulders, hips, and thighs, in particular, and making it difficult to move around without discomfort.

Reproductive Issues

Men may be more prone to erectile dysfunction, low sperm count, and low sex drive. Women may have irregular periods or a complete discontinuation of periods and can make it more difficult to become pregnant.

Chronic Health Conditions

- Osteoporosis: Similar to how cortisol can cause muscle atrophy and thinning of the skin, it can also weaken bones.
- Hypertension: High cortisol levels place extra stress on the heart and blood vessels, causing them to work harder and raising overall blood pressure levels.
- Diabetes: High cortisol levels, over time, can increase insulin resistance and interfere with the removal of glucose, causing hyperglycemia, or high blood sugar.

Things you Can Do to Lower Cortisol Levels



Short bursts of stress can cause an increase in cortisol, though once that threat subsides, so do your cortisol levels (Cay M, Ucar C, Senol D, et al). But if your stress is ongoing, your body's response to this stressful stimuli never shuts down, which means cortisol is continuing to be produced by your adrenal glands and pumped through your body.

Cortisol Test

If you or your healthcare provider suspect that you have high cortisol levels, they can perform a cortisol test to check your levels. This test measures the level of cortisol in your blood, urine, or saliva.

- **Eat a balanced diet**
- **Drink plenty of water**
- **Take supplements**
- **Be physically active**
- **Practice Relaxation**
- **Get 8 hours of sleep**



Can Supplements Help Balance your Hormones?

According to scientific evidence, the following vitamins and minerals may help hormones regain balance.

Magnesium

Magnesium is a mineral essential to numerous systems in your body, including blood sugar control, blood pressure regulation, and hormone regulation.

There is also evidence that magnesium levels are affected by stress. In some studies, magnesium levels have been shown to decrease in times of stress, a common cause of hormone imbalances. In fact, magnesium and stress are thought to be in a vicious cycle in which stress brings on magnesium depletion, which, in turn, causes more stress hormones to be released.

Vitamin D

Vitamin D is considered both a vitamin and a steroid hormone. As a hormone, vitamin D is key to calcium absorption and many other important processes, including estrogen and testosterone synthesis.

Zinc

Zinc is an essential mineral that affects many hormones, including insulin and thyroid hormones. Problems with growth and reproduction have been associated with zinc deficiency. Not getting enough zinc may also lead to the development of certain endocrine diseases.

B Vitamins

There are eight B vitamins, all of which are important to the formation of energy and red blood cells. Some B vitamins are also thought to be important to hormone balance.

Iodine

Low levels of iodine could lead to low levels of T3 and T4. This disruption in thyroid hormone synthesis may also cause hypothyroidism (an underactive thyroid).

Herbal Supplements for Hormone Balance

Some herbal supplements, like those outlined below, are sometimes used to help with hormone balance

Ashwagandha

Ashwagandha (*Withania somnifera*) is a shrub and herbal supplement popular in Ayurvedic medicine, the ancient Indian medical system. It has many uses and may help balance hormones like cortisol and testosterone.

Black Cohosh Root

Black cohosh root (*Actaea racemosa* or *Cimicifuga racemosa*) is an herbal remedy most commonly used to treat symptoms of menopause, such as hot flashes.

Chasteberry

Also known as vitex, chasteberry (*Vitex agnus-castus*) is a medicinal plant that has been used for centuries. Chasteberry is often used to treat irregular periods, premenstrual syndrome (PMS), infertility, and other conditions that typically affect females

Licorice Root

Licorice may do more than just flavor candies and drinks. Licorice root (*Glycyrrhiza glabra*, *Glycyrrhiza uralensis*, *Glycyrrhiza inflata*) has been found to possess substances that may help with hormone imbalances and symptoms from menopause.

Rhodiola Rosea

Rhodiola rosea (*R. rosea*) is a medicinal plant that has long been used in traditional medicine. In more recent history, *R. rosea* has been labeled as an adaptogen, which is a compound thought to help the body react to stress better.



The Top 12 Major Hormones and Their Purpose

1. **Adrenaline (Epinephrine):** Released in response to stress, it increases heart rate, dilates airways, and mobilizes energy stores.
2. **Insulin:** Regulates blood sugar levels by promoting the uptake of glucose into cells for energy or storage.
3. **Glucagon:** Increases blood glucose levels by stimulating the breakdown of glycogen in the liver.
4. **Cortisol:** Regulates metabolism, immune response, and stress response. It also plays a role in glucose metabolism.
5. **Thyroxine (T4) and Triiodothyronine (T3):** Produced by the thyroid gland, they regulate metabolism, growth, and development.
6. **Melatonin:** Regulates sleep-wake cycles and is involved in the body's internal clock.
7. **Estrogen:** Female sex hormone responsible for the development of secondary sexual characteristics and regulating the menstrual cycle.
8. **Progesterone:** Prepares the uterus for pregnancy and helps maintain pregnancy.
9. **Testosterone:** Male sex hormone responsible for the development of male reproductive tissues and secondary sexual characteristics.
10. **Growth Hormone (GH):** Stimulates growth, cell reproduction, and regeneration in humans and other animals.
11. **Prolactin:** Stimulates milk production in the mammary glands after childbirth.
12. **Oxytocin:** Stimulates uterine contractions during childbirth and milk ejection during breastfeeding. It also plays a role in social bonding and trust.

HORMONES



Imbalanced Hormones

Imbalanced hormones can cause a variety of symptoms, which can vary depending on the specific hormone and the extent of the imbalance. Here are some common signs that your hormones may be imbalanced:

1. **Irregular Menstrual Cycles:** Changes in the length, timing, or intensity of your periods can be a sign of hormonal imbalance, particularly in estrogen and progesterone levels.
2. **Mood Swings:** Hormonal fluctuations can affect neurotransmitters in the brain, leading to mood swings, irritability, or anxiety.
3. **Weight Gain or Difficulty Losing Weight:** Imbalanced hormones, particularly insulin, cortisol, and thyroid hormones, can affect metabolism and lead to weight gain or difficulty losing weight.
4. **Fatigue:** Hormonal imbalances, such as low thyroid hormones or adrenal fatigue, can cause persistent fatigue and low energy levels.
5. **Sleep Problems:** Changes in hormone levels, particularly cortisol and melatonin, can disrupt sleep patterns and lead to insomnia or poor sleep quality.
6. **Skin Changes:** Hormonal imbalances can contribute to acne, oily skin, dry skin, or other skin issues.
7. **Digestive Issues:** Imbalanced hormones, such as cortisol or thyroid hormones, can affect digestion and lead to symptoms like bloating, constipation, or diarrhea.
8. **Hair Loss or Thinning:** Changes in hormone levels, particularly androgens like testosterone, can affect hair growth and lead to hair loss or thinning.
9. **Changes in Libido:** Imbalanced hormones, particularly estrogen, progesterone, and testosterone, can affect libido and sexual function.
10. **Hot Flashes or Night Sweats:** These can be a sign of hormonal changes, particularly during menopause when estrogen levels decline.

If you are experiencing any of these symptoms, it's important to consult with a healthcare provider for a proper diagnosis and treatment plan. Hormone imbalances can be caused by a variety of factors, including stress, diet, lifestyle, and underlying health conditions, so it's important to address the root cause with the help of a healthcare professional.

HORMONES





Health For All

3030 East 29th Street, Suite 111 | Bryan, Texas 77802

Phone: 979-774-4176 | Fax: 979-774-4180

Web: www.hlth4all.org